CERTIFICATE OF SERVICE

I do hereby certify that true and accurate copies of the foregoing Verizon Virginia Inc.'s Proffer of Supplemental Evidence were served by messenger this 15th day of April, 2003, to:

William Maher, Chief
Jeffrey Dygert, Assistant Bureau Chief
Wireline Competition Bureau
Federal Communications Commission
Room 5-C317
445 12th Street, S.W.
Washington, D.C. 20544*

Tamara Preiss, Chief of the Pricing Policy Division
Wireline Competition Bureau
Federal Communications Commission
Room 5A225
445 12th Street, S.W.
Washington, D.C. 20544

Cathy Carpino, Attorney Advisor,
Competition Policy Division
Wireline Competition Bureau
Federal Communications Commission
Room 5C231
445 12th Street, S.W.
Washington, D.C. 20544

Mark A. Keffer
Dan W. Long
Stephanie Baldanzi
AT&T
3033 Chain Bridge Road
Oakton, Virginia 22185

Allen Feifeld, Esq. (not served electronically)
Kimberly Wild
WorldCom, Inc.
1133 19th Street, N.W.
Washington, D.C. 20036

J.G. Harrington
Dow, Lohnes & Albertson
Suite No. 800
1200 New Hampshire Avenue, N.W.
Washington, D.C. 20036

David Levy
Sidley, Austin, Brown & Wood
1501 K Street, N.W.
Washington, D.C. 20005

Jodie L. Kelley
Jenner & Block LLC
601 Thirteenth Street, N.W.
Washington, D.C. 20005

Marianne P. Anderson

* Served by electronic delivery only.

VERIZON VIRGINIA INC.

SUPPLEMENTAL TESTIMONY OF JOSEPH A. GANSERT

DOCKET NOS. 00-218, 00-249, 00-251

APRIL 15,2003

SUPPLEMENTAL TESTIMONY OF JOSEPH A. GANSERT

Q. Please state your name.

A. Joseph A. Gansert. I previously submitted written and oral testimony in this proceeding as part of Verizon VA's recurring cost panel.

Q. What is the purpose of this supplemental testimony?

A. I last offered testimony in this proceeding over 16 months ago during the hearings held in October and November 2001. At that time I explained that it was not technologically feasible to use IDLC to unbundle stand-alone loops, even using a GR-303 interface. AT&T/WorldCom, in contrast, insisted that this *was* technologically possible, although they could point to no carrier that was in fact unbundling loops using integrated digital loop carrier (IDLC). AT&T has now publicly admitted that IDLC using the GR-303 interface still is not a technologically feasible means of unbundling stand-alone loops. AT&T has also acknowledged that, to be included in a TELRIC analysis, a technology ***must*** be feasible and must be currently deployed. Therefore, developments since my testimony in this proceeding have only reinforced how inappropriate it is to assume that IDLC — even using the GR-303 interface — could be used to unbundle stand-alone loops in a forward-looking network.

Q. Please summarize your previous testimony with respect to IDLC and GR-303.

A. In my earlier written and oral testimony, I explained why AT&T/WorldCom's proposal to assume that 100% of fiber-fed loops are served by IDLC and GR-303 violates the express TELRIC principle, articulated by this Commission, that UNE

costs must he calculated exclusively on the basis of technology that is "currently available."" This is because the only way that AT&T/WorldCom could conceivably justify this assumption is by demonstrating that IDLC using hypothetical GR-303 capabilities could somehow be used to unbundle stand-alone loops. **(See** AT&T/WorldCom Ex. 12 at 20, 24-26 (positing alleged "capab[ility] of unbundling and grooming circuits" as reason to replace all universal digital loop carrier (UDLC) with 100% IDLC in TELRIC cost studies).) Such GR-303 capabilities do not exist, however. The forward-looking network therefore must contain a significant amount of UDLC to provision unbundled loops (as well as other services).

As I previously explained, IDLC is a remote terminal technology that directly integrates the loop into the switch, and cannot be used to unbundle stand-alone loops that do not use Verizon VA's switching capabilities. (VZ-VA Ex. 107 at 88.) This is true regardless of whether the IDLC that is included in the network uses what is called a GR-303 interface, because the industry has never developed a means of using GR-303 to provision unbundled stand-alone loops in a multi-carrier environment. The obstacles to provisioning unbundled stand-alone loops using IDLC, even with GR-303, center on the functional capabilities such as error protection and OSS and security of the GR-303 remote terminals and digital switches. **As** noted in my earlier testimony, those obstacles simply have not yet been resolved despite the best efforts of the industry. (VZ-VA Ex. 122 at 80.) Thus, the necessary technology does not exist today. And as I testified at the hearing in these proceedings, I am not even aware of any DLC equipment

1/ 47 C.F.R. § 51.505(b)(1).

manufacturer that Verizou VA could use to provision the remote terminal equipment necessary to unbundle loops using a GR-303 interface. (Tr. at 4583-85; *see also* VZ-VA Ex. 124, Attachment A.) Nor were AT&T/WorldCom able to introduce any evidence of any LECs who have used GR-303 to provision unbundled stand-alone loops. (VZ-VA Post-Hearing Br. at 90-91 & n.91.)

Q. **Is the 100% IDLC assumption proposed** by AT&T/WorldCom **consistent with the continued development of competition in Virginia?**

A. No. If no UDLC were deployed in areas served exclusively by fiber, so that all fiber-fed loops in that area used IDLC, it would not be possible to unbundle those fiber-fed loops at all. Since the forward-looking network makes the efficient assumption that many areas where loops are longer than 4,000 feet will be exclusively fiber-fed (VZ-VA Post-Hearing Br. at 87), CLECs seeking to serve customers in such areas over Verizon VA's loops would be compelled to use Verizon VA's switching. This would have the perverse effect of ***discouraging*** CLECs from investing in their own switching, and is therefore fundamentally inconsistent with the continued development of competition in Virginia, where CLECs *have* deployed many of their own switches. Indeed, the vast majority of unbundled loops that Verizon VA has provided in the Commonwealth are stand-alone loops: of the almost 250,000 unbundled loops provided in Virginia as of January 2003, approximately 170,000 were stand-alone loops. Or to put it another way, approximately 70% of the unbundled loops in Virginia have been provided to carriers that use their own switches to provide service over those

loops. But those loops could not be provided over IDLC without UDLC or copper.

Q. Please explain your statement above that AT&T has conceded that under TELRIC rules, the cost of an unbundled loop cannot be premised on technologies that are not currently deployed.

A. Since I testified, I have learned that AT&T has elsewhere acknowledged that forward-looking TELRIC studies must assume technologies that are currently available and deployed. As this Commission itself recently observed, an AT&T witness in the Florida UNE proceeding — which preceded AT&T's testimony in these proceedings — conceded that a forward-looking cost study should reflect the use only of those forward-looking technologies that are "currently available and being deployed."[2/]

Q. Has AT&T now conceded that, even with GR-303, IDLC is not currently capable of providing unbundled stand-alone loops?

A. Yes. For example, in comments filed in connection with the Commission's ***Triennial Review*** proceeding, AT&T stressed that various technological barriers exist to using IDLC (and GR-303) technology for loop unbundling. As AT&T noted, "[t]here are provisioning, alarm reporting, and testing issues that have not yet been worked out for using GR-303 in a multi-carrier environment," and "other

---

[2/] ***See*** *Florida/Tennessee 271* ***Order*** ¶ 41 (***citing*** Final Order on Rates for Unbundled Network Elements Provided by BellSouth, Docket No. 990649-TP (Fla. P.S.C. May 25, 2001), at **332;** ***see*** *also* Testimony of Jeffrey **A.** King in Docket No. 990649-TP (Fla. P.S.C. Sept. 21, 2000), at **2419** (acknowledging earlier written testimony that "forward looking yet currently available and deployed technology" should form the basis of a forward-looking cost study) (relevant excerpt attached as Exhibit 1).

operational concerns must be addressed before the deployment of any solution whose underlying architecture and technology is premised on GR-303 DLCs."[3]

Q. Has AT&T made similar concessions in any other context during the *Triennial Review*?

A. Yes. AT&T has made similar concessions in connection with its recent proposal that ILECs should be required to provide electronic loop provisioning (ELP) as a new proposed tool for loop unbundling.

For instance, in a declaration submitted in connection with AT&T's *Triennial Review* comments, AT&T's Irwin Gerszberg observed that, where a voice-grade loop is connected to an integrated DLC system, it is only possible to provide a stand-alone unbundled loop if the customer is removed from the DLC system, and argued that "the available processes for *removing* the customer's loop from the DLC . . . can be time consuming, entail significant costs . . . and may also cause the customer to receive a degraded level of service.""[4] Notably, Mr. Gerszberg nowhere suggests that some magical GR-303 unbundling capability exists, or even mentions GR-303."

Q. Has AT&T made similar claims to state commissions?

A. Yes. In a presentation to the New York Public Service Commission regarding the supposed benefits of ELP, AT&T again claimed that the process for providing unbundled stand-alone loops where IDLC has been deployed "is costly,

---

[3] Letter from Joan Marsh, Director, Federal Government Affairs, AT&T Corp., to Marlene Dortch, Secretary, FCC, CC Docket Nos. 01-338, 96-98, and 98-147, at 3 (tiled Dec. 4,2002) ("Marsh Ex Parte Letter") (attached as Exhibit 2).

[4] Declaration of lrwin Gerszberg on Behalf of AT&T Corp. *in* CC Docket Nos. 01-338, 96-98, and 98-147 (filed Apr. 4, 2002), ¶ 14 (emphasis added) (relevant excerpt attached as Exhibit 3).

[5] *Id.* ¶¶ 15-16.

inefficient, prone to error and has capacity constraints that ultimately cannot support mass-market entry."[6/] Again, these statements demonstrate that there is no magical GR-303 bullet that solves the IDLC unbundling problem, and that the only currently feasible answer is UDLC.

Q. Has Telcordia, the author of the GR-303 technological protocol, revised its earlier assessment that GR-303 is not ready to be used for stand-alone loop unbundling in a multi-carrier environment?

A. No. **As** Verizon VA noted in these proceedings, Telcordia's work program documentation for 2001 noted that ***"new requirements*** are needed to support alternative distribution technologies . . . as well as new services and applications (*e.g.*, . . .*local loop **unbundling).***" (VZ-VA **Ex.** 157 at 1 (emphasis added); ***see*** *also* Tr. at 4585-86.) In 2003, Telcordia continues to maintain that technological barriers make unbundling using GR-303 infeasible. In its updated web site devoted to GR-303, Telcordia continues to refer to the GR-303 "implementation issues," acknowledging that Telcordia had yet to "resolve implementation issues related to GR-303 NG-IDLC systems."" Telcordia's lack of reported progress highlights the fact that no technological progress has been made by the manufacturers or others in the industry on unbundling using IDLC technology with the GR-303 interface since the record closed in this proceeding, so that UDLC remains the only viable fiber loop technology for provisioning stand-alone loops.

6/ AT&T **New York** ELP **Ex Parte (May** 2002), **at 4 (attached as Exhibit 4).**

7/ <http://www.telcordia.com/resources/genericreq/gr303/> **(last visited Apr. 2,2003) (attached as Exhibit 5).**

Q. Has the Commission itself recently recognized that it is not appropriate to assume 100% IDLC in forward-looking cost studies?

A. Yes. Since the close of the record in this case, the Commission in two separate orders has rejected the notion that a forward-looking network requires the assumption of 100% IDLC, and has instead allowed UNE costs for stand-alone loops to be assessed on the basis of 100% UDLC." Likewise, the Commission has rejected the related CLEC argument that TELRIC requires the assumption of 100% GR-303 technology, which is incompatible with UDLC." In concluding that use of 100% UDLC for stand-alone loops is forward-looking, this Commission noted the "technical limitations associated with unbundling a stand-alone loop from an IDLC system" and commented that the proposed options for using IDLC for such purposes "have not proven practicable.""

Q. Does Verizon VA's use of one blended rate for both stand-alone and UNE-P loops, which is based on an average of the costs of copper, UDLC, and IDLC, make sense?

A. *Yes*. Because Verizon VA charges only one rate for loops (whether leased as a stand-alone loop or as part of UNE-P), the loop cost is assessed based on an average of the costs of the copper, UDLC, and IDLC loops in the forward-looking network; as a result, even though unbundled stand-alone loops cannot in fact be provisioned over IDLC, the rate CLECs pay for such loops is reduced to reflect

---

[8] *Georgia/Louisiana 271* ***Order,*** ¶ 50 (2002); ***see*** *also BellSouth Five-State 271* ***Order,*** ¶ 62 (stating that "a current application of TELRIC" does not require 100% use of IDLC in pricing stand-alone loops).

[9] See BellSouth ***Five-State*** *271* ***Order,*** ¶ 62; *Georgia/Louisiana 271* ***Order,*** ¶ *50* n.180 (noting that the GR-303 argument "merely re-casts the UDLC/IDLC argument in different technical terms").

[10] *Georgia/Louisiana 271* ***Order,*** ¶ *50* (quoting UNE ***Remand Order,*** ¶ 217 nn.417-IS); see ***also*** BellSouth ***Five-State 271 Order,*** ¶ 62.

the lower investment cost of IDLC. Thus, CLECs that provision their own switching are not subjected to a higher-priced copper- and UDLC-only UNE loop rate. By the same token, Verizon VA's study does not make the entirely hypothetical and unattainable assumption that ***all*** fiber-fed loops can be provisioned over IDLC, and thus does not radically underprice stand-alone loops or assume a network on which, as a practical matter, the fiber-fed loops could not be efficiently unbundled at all.

Nonetheless, in assessing forward-looking loop costs for TELRIC purposes, Verizon VA assumed substantially more IDLC than it has deployed in the existing network. Specifically, while in today's network, only **33%** of loops are fiber fed, Verizon VA assumed that 82% of the loops in the forward-looking network would be fiber fed, and that 70% of these (or 57.6% of all loops) would be on IDLC. This is an extremely unrealistic assumption. In the real world, Verizon VA will not achieve this level of fiber penetration or that high a percentage of IDLC at any time in the foreseeable future.

Q. Given that GR-303 cannot be used to unbundle stand-alone loops, is there any reason that GR-303 technology should he assumed for the forward-looking network?

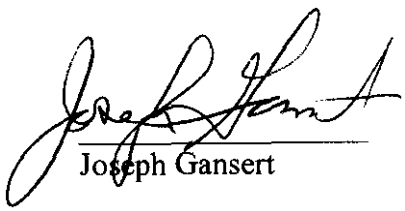
A. No. As I explained in my earlier testimony in this case, we have made the very aggressive assumption that the 10% of the lines in the forward-looking network would be served by GR-303, which primarily affects switching costs. (Since GR-**303** cannot be used to unbundle stand-alone loops, the inclusion of **GR-303** in the network has virtually no effect on stand-alone loop costs.) If Verizon VA were to

perform its cost study again today, however, we would assume ***no*** GR-303 in the forward-looking network, and that is what the Commission should find is the correct assumption for purposes of setting prices here. This is because GR-303 is a circuit switching technology, and the switching equipment industry has abandoned research and development for circuit switching technology in favor of emerging packet switching technology. I testified earlier in this case that Verizon VA had no GR-303 in the network and had no plans to deploy *any* GR-303, because it would not be efficient to invest in this clearly interim technology. (VZ-VA **Ex.** 107 at 91; Tr. at 4087, 4154,4156-57.) And in fact, since the record closed in this case, Verizon VA has made no investments in GR-303 and has not deployed any GR-303 in the network. This underscores why the Commission clearly should not adopt AT&T/WorldCom's proposal that all fiber feeder use GR-303; even Verizon VA's assumption that 10% of all lines be served using GR-303 — with the resulting reduction in switching costs — is unrealistic, and will understate switching costs.

Declaration of Joseph Gansert

I declare under penalty of perjury that I have reviewed the foregoing testimony and that those sections as to which I testified are true and correct.

Executed on April 16, 2003



Joseph Gansert

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of : DOCKET NO. 990649-TP

INVESTIGATION INTO PRICING
OF UNBUNDLED NETWORK
ELEMENTS.

****
* *
* ELECTRONIC VERSIONS OF THIS TRANSCRIPT *
* ARE A CONVENIENCE COPY ONLY AND ARE NOT *
* THE OFFICIAL TRANSCRIPT OF THE HEARING *
* AND DO NOT INCLUDE PREFILED TESTIMONY. *
* *
****

VOLUME 15

Pages **2269** through **2464**

PROCEEDINGS:	HEARING
BEFORE:	CHAIRMAN J. TERRY DEASON COMMISSIONER E. LEON JACOBS, JR COMMISSIONER LILA A. JABER
DATE:	Thursday, September **21, 2000**
TIME:	Commenced at **8:15** a.m.
PLACE:	Betty Easley Conference Center Room **148** **4075** Esplanade Way Tallahassee, Florida
REPORTED BY:	TRICIA DeMARTE Official FPSC Reporter Division of Records & Reporting
APPEARANCES:	(As heretofore noted.)

I N D E X

noninclusion of the GTE passages, but the pages are going to be different.

MR. ROSS: Yes.

BY MR. ROSS:

Q On Page 7 of your revised rebuttal testimony, Lines 17 and 18, when you're describing the underlying themes that should be in a forward-looking cost study, you state that, quote, forward looking yet currently available and deployed technology, close quote, should be used; is that correct?

A Yes.

Q So at least with respect to the OSS technology that you're assuming for purposes of your OSS fallout, that technology has not been yet deployed, to your knowledge?

A I'm not sure how to answer that question. I don't know. And clarification would be, we traditionally look at operational support systems today as being classified as so-called legacy systems. They have been around for a lot of years now, have continued to go through enhancements. I think the current goal is the so-called total network management. TNM is kind of the buzzword where ***OSSs*** ultimately will be driven to total machanization, the ability to communicate with any other piece of OSS equipment. That has been something that the

AT&T

Joan Marsh
Director
Federal Government Affairs

Suite 1000
1120 20th Street NW
Washington DC 20036
2024573120
FAX 202 457 3110

December 4, 2002

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12" Street, SW, Room TWB-204
Washington, DC 20554

Re: Notice of Oral Ex Parte Communication, In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket Nos. 01-338, 96-98 and 98-147

Dear Ms. Dortch

On November 13, 2002, WorldCom, Inc. provided additional information regarding the viability of the DSO Enhanced Extended Link (EEL) as a means to facilitate the expansion of UNE-L based competition. While it is not clear from Worldcom's submission exactly what network architecture and technology its proposal encompasses -- information that is critical in evaluating any proposal of this nature -- it would appear that this proposal would provide only limited help in facilitating the expansion of UNE-L based competition in the near term.

At the outset, it is important to note that WorldCom is clearly correct that it is the legacy incumbent local networks that inherently impede multi-carrier access and that has thwarted CLECs' ability to access voice-grade loops efficiently and cost effectively. WorldCom is also correct that any remedy to this problem requires that the incumbents' networks be modified and upgraded to rectify these shortcomings. However, the underlying technology on which WorldCom's "concentrated EEL" proposal is based will not remedy the inherent network obstacles that impede facilities-based competition, particularly for mass market customers served by analog **loops.** Until policy makers and regulators are ready to fully rectify these problems, alternative means of entry, including UNE-P, will be necessary in order for CLECs to provide competitive services to end-users.

A "concentrated EEL" is simply a loop/transport combination that includes a DLC configuration that would otherwise be deployed by a CLEC in its own collocation, *i.e.*, a DLC that provides analog-to-digital conversion, multiplexing and concentration functionalities ***via*** a **GR-303** interface to its switch. As AT&T has previously demonstrated, the "backhaul" penalty CLECs face in carrying traffic from the loop termination point in an ILEC central office to its own switch is substantial, and includes significant costs for loop provisioning, collocation, DLC equipment and transport between the collocation and its switch.' At best, WorldCom's concentrated EEL proposal only addresses the costs associated with two of those cost components – the collocation and DLC equipment costs.

More importantly, even if the proposal could meaningfully address the entire array of economic penalties, the substantial investment necessary to support a concentrated EEL architecture would be better directed toward the deployment of a ***true*** next generation network configuration that would support ***both*** electronic loop provisioning and multi-carrier access to the high frequency portion of customer loops. Neither of these critical functionalities is addressed by WorldCom's proposal.

WorldCom's proposal would require the incumbents to modify/upgrade their local networks to provide analog-to-digital conversions, multiplexing, and concentration of CLEC loops. One way of achieving this would be **through** the deployment of a **GR-303** DLC architecture. However, in order for the concentrated EELs to be widely available -- and thus to be of meaningful use to CLECs -- the **GR-303** DLC architecture would have to be widely deployed and affect both DLC based and non-DLC based (*i.e.*, direct copper run) loops. This in turn would entail investment that is comparable to that necessary to implement AT&T's Electronic Loop Provisioning (ELP) proposal? Critically, however, a **GR-303** based approach would not produce all the benefits inherent in AT&T's ELP proposal. In particular, WorldCom's proposal does not appear to provide for electronic loop provisioning functionality, nor does it support multi-carrier access to the high frequency portion of the loop. Rather, a **GR-303** approach would likely perpetuate CLEC reliance on the manual hot-cut process and it clearly does not address CLEC access to broadband loops.

---

[1] ***See, e.g.***, AT&T ***exparte*** **entitled "Promoting Mass-Market Competition: Facing the Analog Wall," dated November 8,2002; AT&T *exparte* dated November 26,2002 (demonstrating that SBC's own cost data validate AT&T's showing that CLECs face a significant cost disadvantage in providing POTS service using their own switches).**

[2] **Indeed, SBC has already *asserted* that the necessary capital investment would be $479/line (or more) if it is provided by the incumbent. *See* SBC's ex parte entitled "UNE-Loop/Special Access Network Impact Overview" *at* 7, dated November 13,2002. As AT&T discussed in its Electronic Loop Provisioning proposal, AT&T's estimated cost to fully upgrading an ILEC's network to support hue next generation functionality is ~$113/line. *See* AT&T's ex parte entitled "Electronic Loop Provisioning (ELP): Enabling The Competitive All-Service Network Of The Future" *at* 25 dated August 7,2002.**

In addition to these shortcomings, other operational concerns must be addressed before the deployment of any solution whose underlying architecture and technology is premised on GR-303 DLCs.[3]

* ***GR-303 DLCs Limit The Number of Accessing LECs.*** GR-303 requires the establishment of separate and distinct Interface Groups (IGs) for each LEC seeking access to a given DLC. However, GR-303 currently limits the total number of IGs supported, thus limiting the number of CLECs that could establish an IG for this purpose.

* ***GR-303 DLCs Reduce Trunking Efficiency.*** An architecture that uses GR-303 DLCs for multi-carrier access to end-user loops requires each LEC to use, at a minimum, 1 DS1 uplink from the DLC to its switch. This in turn requires that a CLEC gain a "critical mass" of end-users so that each CLEC can utilize its DS1 uplink efficiently and cost-effectively. However, given current levels of CLEC market share and the typical number of subscribers serviced on any given DLC, such efficiencies may not be present.

* ***A GR-303 Approach May Not Be A Viable Approach For Smaller Sized RTs.*** For smaller sized RTs (*e.g.*, RTs <336 lines) it is unlikely that the supporting feeder facility is fiber. As a result, the necessary facilities required to accommodate multiple GR-303 IGs (*e.g.*, T1s) may not be present.

* ***Provisioning and Testing Issues.*** There are provisioning, alarm reporting, and testing issues that have not yet been worked out for using GR-303 in a multi-carrier environment. Eschelon Telecom has already identified some of these issues!

* ***ILECs Predominately Use TR-08, Not GR-303.*** The predominant protocol currently used in ILEC networks and ILEC DLCs is TR-08, while GR-303 is the standard for CLECs. As a result, GR-303 capable DLCs which are needed to realize the concentrated EEL are not extensively deployed in ILEC networks today.

---

[3] In addition to the issues discussed here, other CLECs such as Eschelon Telecom, Broadview Networks, and Talk America have raised technology and operational issues with respect to WorldCom's concentrated EEL proposal. *See* generally Eschelon et al., November 26, 2002 ex parte.

[4] *See* Letter from David A. Kunde, Executive Vice President of Network Operations, Eschelon Telecom, Inc. to Marlene H. Dortch, Secretary, Federal Communications Commission at 2-3 *dated* October *21, 2002.*

In sum, the concentrated DSO EEL proposal would likely require as much investment as any functional electronic loop provisioning proposal, but would resolve fewer key CLEC problems. Moreover, such a proposal entails a number of practical issues that have not yet been technically resolved. Therefore, it is unlikely to be of significant benefit in promoting facilities-based competition in the short-term, and it certainly **is** not a "cure" for the lack of access to UNE-P to serve mass market customers.

Sincerely,

Joan Marsh

cc: William Maher
Jeff Carlisle
Scott Bergmann
Rich Lemer
Michelle Carey
Brent Olson
Tom Navin
Jeremy Miller
Rob Tanner
Dan Shiman
Simon Wilkie
Don Stockdale

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers	CC Docket No. 01-339, No. 96-98 & No. 98-147

D ARATION OF IRWIN GER
ON BEHALF OF AT&T CO

I. BACKGROUND

1. My name is Irwin Gerszberg. I am a Division Manager in the Advanced Local Network Access Technology Organization for AT&T Local Services in Florham Park, NJ. The organization that I lead is responsible for all "Last Mite" Access Technologies for the AT&T Local Services Network. Accordingly, I have a detailed understanding of the architecture, facilities and equipment used in local networks.

2. I received a Bachelor's degree in Electrical Engineering from the New Jersey Institute of Technology *and* a Master's *degree* in Computer Science from Stevens Institute of Technology. I joined the Bell System in 1978. While *at* Bell Laboratories, I managed large software projects for the Regional Bell Operating Companies ("RBOCs") in advanced operations and testing of the local exchange network In 1985, I led one of AT&T's first Speech Response/Voice Recognition Trials with the RBOCs. In 1989, I joined AT&T's Wireless Unit whae I was responsible for the development of numerous advanced wireless technology services.

12. Increasingly, the incumbent carriers have deployed digital loop carriers ("DLCs"), which are pieces of equipment that are often located remotely from the central office and closer to the customer premises. The DLC and associated equipment takes the communications coming over the copper loops and converts the signal into a digital format, so that communications can be transported more efficiently to the central office.

13. In a standard configuration for DLC existing today, a copper loop runs directly from the customer's premises to a serving area interface ("SAI"). This portion of the loop is known as the distribution plant. The SAI is a point where the copper distribution "sub-loop" from a number of customers terminate. Typically, the loops are cross-connected to additional copper facilities that connects the SAI to a remote terminal ("RT"). RTs are enclosures often located in the ILEC's outside plant – i.e., closer to the customers' premises. The remote terminal typically houses the DLC and other equipment that converts the analog voice communication into a digital format.[1] At that juncture, all the communications h m the loops on the DLC are multiplexed together (to efficiently utilize costly transmission facilities) and transmitted through facilities (either fiber or coppa wire) commonly known as the feeder plant of the local loop. The traffic carried over the feeder plant is terminated directly onto the ILEC's local circuit switch, and is not demultiplexed. Accordingly, in a DLC architecture, an individual customer's traffic arrives at the central office commingled with other customers' traffic.

14. Because of this fact, whae DLC architecture is employed, it is even more difficult to switch a customer's voice-grade loop to a competing carrier's facilities. To serve a

[1] It is important to note that when the copper loops are sufficiently short, DLC equipment can just as easily be deployed in the central office, rather than a remote terminal. Indeed, this is precisely what a competing carrier must do in order to access a voice-grade loop via a hot cut. The competing carrier places DLC equipment into collocation that digitizes and multiplexes the voice-grade loops for backhaul to its switch.

customer whose loop is connected to a DLC, the incumbent carrier must be able to separate the traffic from a particular customer from the traffic of other customers that is commingled on the feeder facility. Unfortunately, the available processes for removing the customer's loop from the DLC can be even more cumbersome than when a main frame termination exists. Such methods can be time consuming, entail significant costs that the incumbent may seek to impose on the new carrier, and may also cause the customer to receive a degraded level of service.

15. A common method for a competing carrier to serve a customer who has a DLC loop is to remove the customer's loop from the DLC and place it back onto an olda copper loop that extends from the customer's premises to the central office. However, this method presents a number of difficulties. First, the process of transferring the DLC loop to a coppa "spare" loop requires an additional set of manual processes – in addition to the hot cut that 1described above. Second, any spare copper loop has necessarily been placed out of service by the ILEC, frequently because they offer customers inferior quality to the digital service provided over DLC. Third, where DLC has been employed from the outset, as frequently occurs in newly constructed areas, there may simply be no spare copper loop at all. Fourth, a spare copper loop necessarily has a longer length of copper than a DLC loop, and reverting to the spare loop lowers the available bandwidth on the loop compared to the DLC loop and necessarily results in a lower grade of service capability.

16. Other methods for removing a loop from a DLC so that it can be made available to a competitor are equally flawed. For example, the ILEC could install demultiplexing equipment before the feeder facility terminates into the ILEC circuit switch. That would demultiplex all of the traffic from a DLC-fed feeder and re-convert the traffic from a digital to an analog format. The particular loop used to serve the customer won by the competing carrier